

REMARKS

Claims 1-23 are pending in the application. Claims 1-23 have been rejected.

Applicants thank the Examiner for conducting an Examiner's interview on February 17, 2006.

The specification has been amended to correct a grammatical error. On page 10 of the specification as originally filed, the word "using" at line 27 has been replaced with the words "use in." This amendment is of a clerical nature. No new matter is introduced by way of this amendment. Therefore, Applicants' respectfully request that this amendment be entered.

Claim 23 has been rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claim 23 has been cancelled.

As shown in FIGS. 3 and 4 of Applicants' patent application as originally filed, Applicants provide a syntax template 72 for a foundation domain model 70. The syntax template 72 tells a syntax manager 62 how to take the general syntax template 72 and turn it into a more specific grammatic specification (e.g., a Backus Naur Form (BNF) grammar) based on information in the domain model 70. Specification, page 14, line 23 through page 15, line 6. The syntax template may take the following form:

template statement(object)

attribute = object%monoattributes

<statement> = <article> <attribute> of <object> is <attribute.range>.

The syntax manager 62 automatically processes the syntax template 72 to generate the more specific grammatic specification. The automatically generated grammatic specification may take the following form:

<statement> = <article> <attribute> of <object> is <value>.

In this manner, the automatically generated grammatic specification may capture a desired meaning by relating a set of legal attributes to a specific type of an object and by relating

a set of legal values to a particular attribute in question. Specification, page 14, lines 15-18. Thus, the automatically generated grammatic specification 90 may disallow sentences that specify attributes of objects that do not possess those attributes. Specification, page 14, lines 18-20.

To capture a desired meaning in a grammatic specification using conventional grammars, such as BNF grammar, would require separate definitions for each type of attribute, and separate sets of attributes for each type of object. Specification, page 14, lines 20-23. Moreover, conventional grammars are limited in that it is typically difficult to consistently specify and maintain large grammars. Applicants' invention, however, applies more general syntactic templates to the domain model, thus allowing more consistent generation across the grammar. Because Applicants' invention results in fewer templates, maintenance is easier than in a conventional grammar. Also, the syntactic templates of Applicants' invention are more abstract in nature, and thus changes to the syntactic templates propagate throughout the generated grammar. Specification, page 2, lines 20-26.

Claims 1-5, 7-12, 14-19 and 21-23 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Loatman *et al.* (U.S. Pat. No. 4,914,590) ("Loatman").

As shown in FIG. 1 of Loatman, a syntactic parse module 80 parses sentences of text 20 syntactically according to a Augmented Transition Network (ATN) grammar specification 90 by identifying the subject, main verb, direct and indirect objects, etc. for each sentence and forms a syntactic structure 100 (col. 6, lines 35-42). A case frame applier module 120 uses "case frame templates" 110 to convert the syntactic structure 100 into "case frames" 120 that are language-independent semantic structures representing a proposition about the world. The "case frames" are processed by a discourse analysis component 130 which applies domain knowledge templates 135 to integrate explicit and implicit information of the sentences into conceptual structures 140 representing its meaning (col. 6, lines 57-62).

Thus, Loatman discloses applying domain knowledge templates to semantic structures (i.e., case frames 120) to create conceptual structures 140, but does not teach or suggest using domain knowledge to generate a grammatic specification that is used to determine the syntactic structure of the sentences. Specifically, Loatman does not teach or suggest using a general syntax template for a domain model to generate a more specific grammatic specification, as

claimed in now amended Independent Claim 1 (“generating a grammatic specification suitable for processing the spoken utterances based on a domain model . . . and based on a syntax template for the domain model”). According to Applicants’ claimed invention, a domain model and a syntax template for the domain model are combined to generate a grammatical specification suitable for processing a spoken utterance to obtain its syntactic structure. Support for now amended Claim 1 may be found in the Specification as originally filed at least at page 15, lines 1-12. Because Loatman does not teach or suggest “generating a grammatic specification suitable for processing the spoken utterances based on a domain model . . . and based on a syntax template for the domain model” as recited in now amended Claim 1, Applicants respectfully request that the rejection of Claim 1 be withdrawn.

Independent Claims 8, 15, and 22 have been amended to include similar limitations as base Claim 1 and are allowable for the same reasons as Claim 1. Therefore, Applicants respectfully request that the rejection of Claims 8, 15, and 22 be withdrawn.

Dependent Claims 2 and 16 have been amended to be consistent with the amendments to respective base Claims 1 and 15. Accordingly, Applicants respectfully request that these amendments be entered.

Since Claims 2-5 and 7 depend from now amended base Claim 1, Claims 9-12 and 14 depend from now amended base Claim 8, and Claims 16-19 and 21 depend from now amended base Claim 15, they are allowable for the same reasons. Claim 23 is now cancelled. Therefore, Applicants respectfully request that the rejection of Claims 2-5, 7, 9-12, 14, 16-19, 21, and 23 be withdrawn.

Accordingly, the §102 rejection of Claims 1-5, 7-12, 14-19, and 21-23 is believed to be overcome. Acceptance is respectfully requested.

Claims 6, 13 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Loatman in view of Phillips *et al.* (U.S. Pat. No. 6,519,562) (“Phillips”).

As explained above, Loatman does not disclose every limitation of now amended base Claims 1, 8, and 15. Phillips does not add to Loatman “generating a grammatic specification suitable for processing the spoken utterances based on a domain model . . . and based on a syntax template for the domain model of a speech-enabled application” as claimed in now amended base Claims 1, 8 and 15. Thus, no combination of Phillips and Loatman make the claimed invention

obvious. Since Claims 6, 13 and 20 depend from now amended base Claims 1, 8 and 15, respectively, they are allowable for the same reasons. Therefore, Applicants respectfully request that the rejection of Claims 6, 13 and 20 be withdrawn.

CONCLUSION

In view of the above amendments and remarks, it is believed that all pending claims (Claims 1-22) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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